

Work Order ID 152432

Monday, October 24, 2016 11:41:03 AM

152432

Page 1

Item ID: D6101-015

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Saddle Billet

Start Date: 11/17/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/18/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: DAS Date: OCT 24 2016

Pooling:

Date:

Run Start

NR1QC: 21

Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	B								

100

0.00

100

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O:

34109
a) Description: Alluminum billet
b) 9.450" x 6.250" x 2.50" thick (+0.030 / -0.000)
c) Tolerance on all dimensions are +0.030 / -0.000"
d) Grain direction along 9.450" length
e) Material: 7075-T7351 (QQ-A-250/12)
f) Material certification required

10

OCT 28 2016

DAS
13
9-59

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.03

Packaging

Ensure material certification is attached

10x SP/6-11-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐								
Misidentified	☐	Past Due	☐	OTHER :							

Work Order ID 152432

Monday, October 24, 2016 11:41:03 AM

152432

Page 2

Item ID: D6101-015 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle Billet
Start Date: 11/17/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 11/18/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120	<i>QC18</i>					<i>10</i>	<i>10</i>		<i>mf</i>
QC	Memo	0.00							<i>16/11/17</i>
Quality Control	Ensure Material certification comply to Dwg D6101								
	<i>DAS 10 9-89</i>								
130	Identify as per dwg & Stock Location: <i>MAT045</i>	0.00							
130						<i>10</i>	<i>10</i>		<i>mf</i>
Packaging	Memo	0.02							<i>16/11/17</i>
Packaging	LOCATION: MAT045								
140	QC21- Final Inspection - Work Order Release	0.00							
140							<i>DAS 21 9-89</i>	<i>NOV 17 2016</i>	
QC	Memo	0.17							
Quality Control									
	<i>DAS 21 9-89</i>							<i>NOV 17 2016</i>	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

Picklist Print

Monday, October 24, 2016 11:41:03 AM

Page 1

Work Order ID: 152432

152432

Parent Item: D6101-015

D6101-015

Parent Item Name: Saddle Billet

Start Date: 11/17/2016

Required Date: 11/18/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-015P		Purchased				110	Each	0.0000	1	10			
D6101-015P									**				
ALUM BILLET													

10x Sp16-1115.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



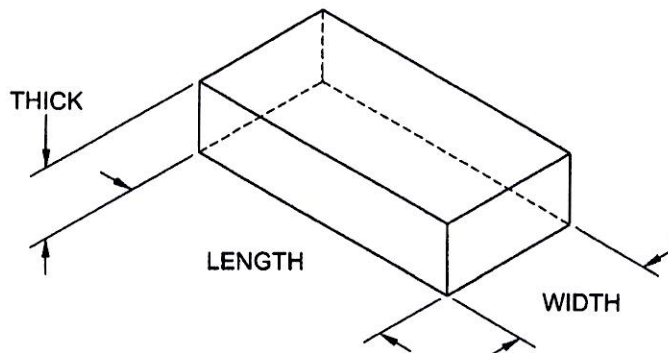
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

SPECIFICATION CONTROL DRAWING



SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 152432 M/S
 16-10-24

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED

09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO34109**

Purchase Order Date 10/28/2016

PO Print Date 10/28/2016

Page Number 1 of 3

Order From :
METAUX CASTLE
P.O. BOX 4090 STN A
TORONTO, ONTARIO M5W OE9
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

OCT 31 2016

Contact Name	Buyer	Chantal Lavoie
Vendor Phone	Customer POID	
	Customer Tax #	10127-2607
Ship To Contact	Terms	Net 30
Ship To Phone	Currency	USD
Ship Via: Yours ppd	FOB	Destination-Collect
Ship Acct:		

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
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1	D6101-005P	7075-T7351 8.25X5.0X2.5	11/14/2016 Yes 11/14/2016		20.00 Each	\$36.20	\$724.00
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AS PER DWG.D6101 REV.B
B152208
SIZE: 5.00" X 8.250" X 2.50" THICK
GRAIN DIRECTION ALONG 5.00" LENGHT
MATERIAL: 7075-T7351 QQ-A-250/12
TOLERANCE AS PER QUOTE +.030"/-.000"

Line Total: \$724.00

2	D6101-015P	ALUM BILLET	11/14/2016 Yes 11/14/2016		10.00 Each	\$52.00	\$520.00
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AS PER DWG D6101 REV. B
B152432
size: 9.450" X 6.250" X 2.50" thick
Tolerance on all dimensions are +0.030"/-0.000"
Grain direction along 9.450" length
Material: 7075-T7351 (QQ-A-250/12)

NOV 15 2016

DAS
26
9-18

Note:

10/28/2016

INTERORG TRANSFER
PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3121738

Ship From: A. M. CASTLE & CO. 3050 S HYDRAULIC WICHITA, KS 67216 USA		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 08-NOV-16	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier OLD DOMINION		BOL No 3121738-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No 4549055	Line No 2	Item No 752241.MO	Description 2.5000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 9.45")) X 9.45 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 9.45")) - ALUMINUM PLATE SAW SPECIFICATIONS. AMS-QQ-A-250/12 Email P/s and certs to: clavoie@dartaero.com	
Purchase Order No 34109	Part Number YOUR ITEM NUMBER: D6101-015		Ordered Qty 10.00 PCS	Invoice Qty 10.00 PCS

Details	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS
----------------	--

Delivery No. 120654241	Mill KAISER ALUMINUM	Heat Number 	Mech Id	PCS 10	Width (IN)	Length (IN)	Shipped Qty(LBS) 152.7121
----------------------------------	-----------------------------------	---	----------------	------------------	-------------------	--------------------	-------------------------------------

DAS
26
9-89
NOV 15 2016

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.

Date Printed: 08-NOV-2016 03:00:54 PM

INTERORG TRANSFER
PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Allison R. Hayes


Date:

Name:

NOV 15 2016

DAS
26
9-89

SHIP TO:

A M CASTLE & CO
3050 SOUTH HYDRAULIC
WICHITA, KS 67216

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

Serial Number

4403443

CUSTOMER PO NUMBER: 344049	WORK PACKAGE:	CUSTOMER PART NUMBER: 752241	SHIP RUN/LOAD: 103437/9	GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: 1199092	LINE ITEM: 1	SHIP DATE: 6-JAN-2016	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: KaiserSelect Plate
WEIGHT SHIPPED: 5412 LB	QUANTITY: 3 PCS EST.	TRUCK B/L #: 2057936	GUAGE: 2.5000 IN (63.5000 MM)	DIAMETER/WIDTH: 48.500 IN (1231.8 MM)	LENGTH: 144.500 IN (3670.3 MM)	

MHU 1960912: LOT 159738B4: 1 pieces;

MHU 1960921: LOT 782747AD: 2 pieces;

Certified Specifications

AMS 4078/RevJ
ASTM B 209/Rev14
BSS 7055/RevB
DPS 4.713/RevAK
MMS 159/RevT

AMS-QQ-A-250/12/RevA
ASTM B 594/Rev13
CMMP 025/RevU
GAMPS 9101/RevB/AmdSCN1
PS 21211/RevM

AMS-STD-2154/RevA
BAC 5439/RevJ
CSTI 008/RevE
GSS16100/RevG/Amd1

Test Code: 4297

Test Results

Lot: 159738B4 Cast 108

Drop 25

Ingot 5

Melted in USA

(ASTM E8/B657)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	68.8 : 69.0 (474 : 476)	57.6 : 57.7 (397 : 398)	11.4 : 11.9

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.1 Min	40.4 Max
(MS/M) :	23.3 Min	23.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.19	1.5	0.05	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.05



KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4403443

Lot: 782747A0 Cast 108 Drop 25 Ingot 5 Parent Lot: 159738B4 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper:	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min;Max)	69.0 : 69.6 (476 : 480)	58.0 : 58.8 (400 : 405)	11.2 : 11.5

(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :	39.7 Min	40.4 Max
(MS/M) :	23.0 Min	23.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.19	1.5	0.05	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.05

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15413B R 6
AMS 4078, AMS QQ-A-250/12, AMS STD-2154, A
STM B209, ASTM B594, BS
S 7055, CMMP 026, CSTI 006, DPS 4.713, GAMP
S 9101, MMS 159, PS 212

11

TEST NOTES

Metal represented by this test report was 100% Type I
(immersion) ultrasonically tested from one side with 3mm
dead zones top and bottom and meets the Class A and Class B
requirements of all specifications referenced on this test
report. No surface marking of sonic indications is
performed.





Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4403443

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser), is ISO 9001:2008/AS9100C certified and hereby certifies that all material shipped under this order:
* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements.
* was melted in the United States of America or a qualifying country per OFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of OFARS 252.225 for domestic content.
* has been thermally processed in compliance with AMS 2772, where applicable;
* is mercury free, within the limits of detection of ASTM E1251 (< 1 ppm);
* is in compliance with RoHS 2, European Union Directive 2011/65/EU;
* is in compliance with and regularly monitors any updates to the European Chemical Agency, ECHA, REACH regulations, (EC) n°1907/2006;
* is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or omissions on the certificate may be punished as a felony under federal law.

JAMES HEMENWAY, LABORATORIES SUPERVISOR



**Castle Metals®**

A.M. Castle & Co.

North American Free Trade Agreement - CERTIFICATE OF ORIGIN

Exporter Name A.M. Castle & Co. A. M. Castle & Co. 3050 S HYDRAULIC WICHITA, KS 67216 Tax Identification Number: 36-0879160	Reference Number 3121738-2
Producer Name Tax Identification Number: Available Upon Customs Request	Importer Name A.M. Castle & Co. A. M. Castle & Co. (Canada) Inc. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 Tax Identification Number: 13835 3438 RC0001

Description of Good(s)	Heat Number	HTC	Preference Criterion	Producer	Net Cost	Country of Origin
750704.MO 2.2500.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000	171669B5	760612	B	No2	No	US
752241.MO 2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000	782747A0	760612	B	No2	No	US
752241.MO 2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000	782747A0	760612	B	No2	No	US
771013.MO 0.1250.SH.2024.O.ALUMINUM.BARE.48.0000.144.0000	191652B7	760612	B	No2	No	US

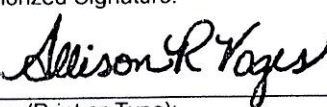
I certify that:

The information on this document is true and accurate and I assume responsibility for proving such presentations. I understand that I am liable for any false statements or material omissions made on or in connection with this document;

I agree to maintain and present upon request, documentation necessary to support this certificate, and to inform, in writing, all persons to whom the certificate was given of any changes that would affect the accuracy or validity of this certificate;

The goods originated in the territory of one or more of the parties, and comply with the origin requirements specified for those goods in the North American Free Trade Agreement, and unless specifically exempted in Article 411 or Annex 401, there has been no further production or any preparation outside the territories of the parties; and

This certificate consists of _____ pages, including all attachments.

Authorized Signature:  	Company: A. M. Castle & Co.	
Name (Print or Type):	Title:	
Date:	Telephone:	Fax:

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6101-015
 DATE: 16/11/17

PO / BATCH NO.: 34109/152432

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 10
 QUANTITY INSPECTED: 10
 QUANTITY REJECTED: _____

THICKNESS ORDERED: 2.500
 THICKNESS RECEIVED: 2.500
 SHEET SIZE ORDERED: _____
 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒	
CORRECT FINISH	☒ N	
CORROSION	Y ☒	
CORRECT GRAIN DIRECTION	☒ N	
CORRECT MATERIAL	☒ N	7075-T7351
CORRECT THICKNESS	☒ N	2.500
PHOTO REQUIRED	Y ☒	
CORRECT MATERIAL	☒ N	AMS QQ-A-250/2
CORRECT REF # TO LINK CERT	☒ N	HEAT# 782747A0
CORRECT MATERIAL IDENTIFICATION	☒ N	D6101-015
CORRECT M# ON THE MATERIAL	☒ N	B152432
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>mk</u> DATE: <u>16/11/17</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in